

### Abstract of the Disclosure

A method and apparatus for improving dispersal performance of instruction threads is described. In one embodiment, the dispersal logic determines whether the instructions supplied to it include any NOP instructions. When a NOP instruction is detected, the dispersal logic  
5 places the NOP into a no-op port for execution. All other instructions are distributed to the proper execution pipes in a normal manner. Because the NOP instructions do not use the execution resources of other instructions, all instruction threads can be executed in one cycle.